

U.S. PTO
08/09/99

A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DOCKET NUMBER	ANTICIPATED CLASSIFICATION OF THIS APPLICATION:		PRIOR APPLICATION	
	CLASS	SUBCLASS	EXAMINER	ART UNIT
8942.30US01	256	48	H. Kim	3629

CERTIFICATE UNDER 37 CFR 1.10:

"Express Mail" mailing label number: EL435536722US
Date of Deposit: August 9, 1999

I hereby certify that this paper or fee is being deposited with the U.S. Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Assistant Commissioner for Patents, Washington, D C 20231.

By: Hassen Bu Co
Name: Hassen Buie

U.S. PTO
09/370417
08/09/99

CONTINUATION APPLICATION UNDER 37 C.F.R. § 1.53(b)

BOX PATENT APPLICATION
Assistant Commissioner for Patents
Washington, DC 20231

Dear Sir:

This is a request for filing a continuation application under 37 CFR § 1.53(b) of Serial No. 08/925,576, filed on September 8, 1997 entitled FENCE STRAND RETAINER CLIP FOR FENCE POSTS by the following inventor(s):

Full Name Of Inventor	Family Name	First Given Name	Second Given Name
	BERG	Jon	A.
Residence & Citizenship	City	State or Foreign Country	Country of Citizenship
	Ellendale	Minnesota	U.S.A.
Post Office Address	Post Office Address	City	State & Zip Code/Country
	906 Fifth Ave. East	Ellendale	Minnesota, 56026 U.S.A.
Full Name Of Inventor	Family Name	First Given Name	Second Given Name
	LANGLIE	Ronald	H.
Residence & Citizenship	City	State or Foreign Country	Country of Citizenship
	Ellendale	Minnesota	U.S.A.
Post Office Address	Post Office Address	City	State & Zip Code/Country
	906 Fifth Ave. East	Ellendale	Minnesota 56026 U.S.A.
Full Name Of Inventor	Family Name	First Given Name	Second Given Name
	BUELOW	David	F.
Residence & Citizenship	City	State or Foreign Country	Country of Citizenship
	Ellendale	Minnesota	U.S.A.
Post Office Address	Post Office Address	City	State & Zip Code/Country
	906 Fifth Ave. East	Ellendale	Minnesota 56026 U.S.A.

- ☒ Enclosed is a copy of the prior application; including the specification, claims, drawings, oath or declaration showing the applicant's signature, and any amendments referred to in the oath or declaration filed to complete the prior application. (It is noted that no amendments referred to in the oath or declaration filed to complete the prior application introduced new matter therein.) The continuing application is as follows: 6 pages of specification, 17 claims, 1 pages of abstract, 6 sheets of drawings, and 4 pages of oath or declaration.
- ☒ The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

2. ☐ Cancel original claims _____ of this application before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)
3. ☒ The filing fee is calculated below:

CLAIMS AS FILED

NUMBER FILED	NUMBER EXTRA		RATE	FEE
TOTAL CLAIMS: 17 -20	0	x	\$0.00	\$0.00
INDEPENDENT CLAIMS 1 -3	0	x	\$0.00	\$0.00
			BASIC FILING FEE:	\$380.00
			TOTAL FILING FEE:	\$380.00

- 556929 "6702663
- ☒ A Verified Statement that this filing is by a small entity is already filed in the prior application.
- ☐ A Verified Statement that this filing is by a small entity is attached.
4. ☒ Payment of fees:
☒ Attached is a check in the amount of \$380.00 .
☐ Please charge Deposit Account No. 13-2725.
5. ☒ The Commissioner is hereby authorized to charge any additional fees as set forth in 37 CFR §§ 1.16 to 1.18 which may be required by this paper or credit any overpayment to Account No. 13-2725.
6. ☒ Amend the specification by inserting before the first line the sentence:

"This application is a Continuation of application Serial No. 08/925,576, filed September 8, 1997, which application(s) are incorporated herein by reference."
7. ☒ A set of formal drawings (6 sheets) is enclosed.
8. ☐ Priority of application Serial No. _____, filed on _____ in _____, is claimed under 35 U.S.C. 119.
- ☐ The certified copy has been filed in prior application Serial No. _____, filed _____.
9. ☒ The prior application is assigned of record to NORTH CENTRAL PLASTICS located at 906 5th Ave. East, Ellendale, Minnesota 56026 (Reel 9047, frame 667).
10. ☒ The Power of Attorney in the prior application is to:

Merchant & Gould P.C.
3100 Norwest Center
90 South Seventh Street
Minneapolis, MN 55402-4131

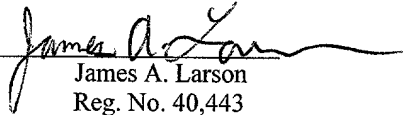
11. ☐ A preliminary amendment is enclosed. (Claims added by this amendment have been properly numbered consecutively beginning with the number next following the highest numbered original claim in the prior application.)
- ☐ Fee for excess claims is attached.
12. ☐ A petition and fee has been filed to extend the term in the prior application until _____. A copy of the petition for extension of time in the prior application is attached.
13. ☐ The inventor(s) in this application are less than those named in the prior application and it is requested that the following inventors identified above for the prior application be deleted:
14. ☒ Also Enclosed: Information Disclosure Statement and PTO Form 1449
15. ☒ Address all future communications to the **Attention of Douglas P. Mueller** (may only be completed by attorney or agent of record) at the address below.
16. ☒ A return postcard is enclosed.

Respectfully submitted,

MERCHANT & GOULD, P.C.
3100 Norwest Center
90 South 7th Street
Minneapolis, MN 55402
(612) 332-5300

Dated: August 9, 1999

By: _____


James A. Larson
Reg. No. 40,443
JAL/kcd

SMALL BUSINESS

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 C.F.R. 1.9(f) AND 1.27(c)) - SMALL BUSINESS CONCERN**

I hereby declare that I am

- a) ☐ the owner of the small business concern identified below:
b) ☐ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN: NORTH CENTRAL PLASTICS
ADDRESS OF CONCERN: Interstate 35W and Highway 10
R.R. Box 1A
Ellendale, Minnesota 56026

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 C.F.R. 121.801-805. and reproduced in 37 C.F.R. 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled FENCE STRAND RETAINER CLIP FOR FENCE POSTS by inventor(s) Jon A. Berg, Ronald H. Langlie and David F. Buelow described in

- a) ☐ the specification filed herewith.
b) ☐ provisional application serial no. ____, filed ____.
c) ☒ non-provisional application serial no. 08/925,576, filed September 8, 1997.
d) ☐ patent no. ____, issued ____.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 C.F.R. 1.9(c) or by any concern which would not qualify as a small business concern under 37 C.F.R. 1.9(d) or a nonprofit organization under 37 C.F.R. 1.9(e). *NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 C.F.R. 1.27)

NAME _____
ADDRESS _____
a) ☐ INDIVIDUAL b) ☐ SMALL BUSINESS CONCERN c) ☐ NONPROFIT ORGANIZATION

NAME _____
ADDRESS _____
a) ☐ INDIVIDUAL b) ☐ SMALL BUSINESS CONCERN c) ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereof, or any patent to which this verified statement is directed.

NAME: Ron Langlie
TITLE: VP
ADDRESS: 906 Fifth Ave E, Ellendale, MN 56026
SIGNATURE: *Ron Langlie* Date: 2 2 98

FENCE STRAND RETAINER CLIP FOR FENCE POSTS

Field of the Invention

The present invention relates to a retainer clip or latch that is attached to a fence
5 post for securing fence strand members to the fence post, particularly for use in electric
fencing systems.

Background of the Invention

A fence is generally constructed of a plurality of spaced, vertically extending
10 fence posts with fence strand members, such as electric wire or tape, barbed wire, etc.
extending between the fence posts at spaced vertical locations along the fence posts. The
fence strands are typically secured to each fence post in order to secure the fence strands
in place and maintain the vertical spacing thereof. Previous systems for securing fence
strand members to fence posts include forming holes or slots in the fence posts to receive
15 the fence strands, as shown in U.S. Patent 2,861,122; providing tabs or projections on the
fence posts for securing the fence strands, as shown in U.S. Patents 2,821,365 and
4,070,007; and by using retainer members which are secured around the fence post and
fence strands for securing the fence strands in place, such as shown in U.S. Patent
3,977,653. These previous securement systems however are generally designed for use
20 with a single type of fence strand member and thus do not allow for a wide range of
fencing materials to be secured to the fence post. Additionally, many of the previous
securement systems are difficult to use, often times requiring a physical deformation of
the securement structure, in order to both secure the fence strands in place and to permit
removal of the fence strands, thus usually requiring the use of a deformation tool.

25 What is needed then is a system for securing fence strand members to a fence post
that can be used with a wide variety of fence strand members, and that does not require a
physical deformation of a securement member in order to secure the fence strands in
place.

Summary of the Invention

Therefore the general purpose of the present invention is to provide a retainer clip or latch attached to a fence post, such as a plastic fence post, for use in electric fences, that can be used with different types of fence strand members, and that is operated by hand to permit easy securement and removal of the fence strand members.

A preferred embodiment of the retainer clip in accordance with the principles of the present invention includes a first portion attached to a support base member of the fence post and a second, moveable portion hingedly attached at a first end thereof to a first end of the first portion and disposed over the first portion. The first and second portions are made of a non-conducting material, such as plastic. The first ends are preferably integrally attached to each other, thus forming a film hinge at the first ends. The second portion includes a second end that is in selective engagement with a second end of the first portion, whereby when the second ends are engaged, a generally circular loop and an elongated, rectangular shaped area are defined between the portions. The loop is located adjacent the first ends for holding a slender strand member, such as wire or rope. The elongated area is located between the loop and the second ends for holding a relatively wide strand member, such as tape, therein. The second, moveable portion includes a finger extending therefrom toward the first portion, and the first portion includes a notch that receives the finger when the second ends are engaged. The finger separates the loop from the elongated area, to prevent movement of the strand member from its respective area. In addition, the first portion includes a tapered locking shoulder at the second end thereof, and the second portion includes a tapered locking tab at the second end thereof, so as to form a selectively releasable connection between the first portion and the second portion. A finger actuated tab is connected to the tapered locking tab for releasing the connection between the locking tab and the locking shoulder. The clip can be attached to various portions of the fence post, such as the head portion of a T-shaped fence post, an elongate bar which spaces the clip from the post, or an end cap secured to an end of the fence post.

These and various other advantages and features of novelty which characterize the invention are pointed out with particularity in the claims annexed hereto and forming a part hereof. However, for a better understanding of the invention, its advantages and objects obtained by its use, reference should be made to the drawings which form a
5 further part hereof, and to the accompanying description, in which there is described a preferred embodiment of the invention.

Description of the Drawings

10 Figure 1 is a side view of a retainer clip attached to a fence post, with the clip in an open position.

Figure 2 is a view similar to Figure 1, but with the clip in a closed position.

Figure 3 is a perspective view of the fence post showing a plurality clips spaced along the post.

15 Figure 4 is a view of the clip attached to a bar which can be secured to a T-shaped fence post.

Figure 5 is a view of the clip with a detachable securement to a T-shaped fence post.

Figure 6 is a view of the clip attached to an alternate bar for detachable securement to a wooden fence post.

20 Figure 7 is a view of the clip attached to an end cap of the fence post.

Detailed Description of the Drawings

As shown in Figures 1-3, retainer clips 10 are attached to a fence post 12 in order to secure fence strand members to the fence post. The fence post 12 can be made of a
25 plastic, wood, or other non-conducting material, for use in an electric fence system. The clips 10 are also made of a non-conductive material, such as plastic, so that the clips are able to support electric fence strand members without conducting electricity.

As shown in Figures 1-2, each retainer clip 10 includes a first portion 14 attached to a portion of the fence post and a second, moveable portion 18 generally doubled back
30 over the first portion. The second portion 18 includes a first end 20 which is resiliently

connected to a first end 22 of the first portion 14 so as to form a hinged connection therebetween. The connection between the first ends 20,22 generally forms a film hinge, which permits the second portion to pivot relative to the first portion. The second portion 18 further includes a second end 24 which can be selectively engaged with a second end 26 of the first portion 14. Each portion 14,18 is made of a non-conducting material, such as plastic or a suitable composite, in order to support electric fence strand members without conducting electricity.

As best seen in Figure 2, when the second ends 24,26 are engaged, a generally circular loop 28 is defined adjacent the first ends 20,22 of the clip for holding and retaining a slender fence strand member, such as electric wire, barbed wire, or rope. A generally rectangular, elongated area 30 is also formed between the overlapping portions 14,18 for holding a broader fence strand member, such as electric tape, therein.

The portion 18 includes a finger 32 extending therefrom toward the portion 14, and the portion 14 includes a notch 34 therein that receives the finger when the second portion is engaged with the first portion, as is seen in Figure 2. The finger is located between the loop 28 and the elongated area 30 in order to prevent a slender strand member within the loop from moving up into the elongated area, and vice-versa.

As stated previously, the two portions 14,18 are selectively releasably engaged with each other to secure the strand member(s) within the clips 10 by connecting the second ends 24,26 together. The portion 14 includes a tapered locking shoulder 36 at the second end 26, while the second portion 18 includes a tapered locking tab 38 at the second end 24 thereof. The tapered locking tab 38 and the tapered locking shoulder 36 form a selectively releasable connection between the first portion and the second portion, with a finger release tab 40 connected to the tapered locking tab 38 for releasing the connection between the locking tab and the locking shoulder. The tab 40 can be moved backward using a thumb or finger from the position shown in Figure 2, so as to release engagement between the tab and shoulder, and permit the second portion to be pivoted to the position shown in Figure 1. The tapered locking shoulder 36 includes an angled side 42 and a straight side 44, while the tapered locking tab 38 includes an angled side 46 and a straight side 48. The angled sides 42,46 on the tab and shoulder permit the second

portion to be moved to the locked position shown in Figure 2 by sliding over each other, with the straight sides facing each other once in the locked position in order to retain the clip in the locked position until the tab 40 is actuated to release the connection.

The clips can retain a single fence strand member in either of the loop or elongated area, or a fence strand member can be secured in each one of the loop and elongated area. Once the fence strand member is properly located within the clip, the second portion is pivoted toward the first portion, and the second ends thereof are secured together to retain the strand members in place. To remove a fence strand, or to add a strand, the user simply actuates the release tab 40 backwards, thus pivoting the locking tab 38 away from the locking shoulder 36 to permit disengagement of the second ends.

As shown in Figure 3, the fence post 12 can be generally T-shaped including a head portion 50 and a stem portion 52 extending generally perpendicularly from the head portion. The fence post 12 includes a plurality of the clips 10 at spaced locations therealong in order to vertically space the fence strands. The clips 10 are attached to the head portion 50 of the post 12 by being integrally attached thereto during formation of the post, or by being secured to the post after formation thereof.

Figure 4 shows an embodiment where the clip 10 is secured to the end of an elongated bar 54 for spacing the clip a desired distance away from the main portion of the T-shaped fence post 12. The bar 54 is also made of a non-conductive material, such as plastic, and includes a fastener 56 at its end opposite the clip 10 for detachably securing the bar 54 to the head portion 50 of the post 12. As shown, the fastener 56 includes a pair of hooks 58a,b at each end which hook around the head portion, with a release tab 60 connected to the hook 58a for facilitating release of the connection between the fastener and the head portion. A plurality of the clip and bar assemblies can be secured along the length of the post 12, in addition to, or in place of, the clips attached to the post, for securing the fence strands to the post.

Figure 5 shows an embodiment similar to Figure 4, but in this embodiment, the bar 54 is eliminated so that the clip 10 is attached directly to the fastener 56. This embodiment thus provides a detachable securement of the clip to the fence post, without

the clip being spaced a large distance from the post. The construction and operation of this embodiment is otherwise similar to Figure 4.

Figure 6 illustrates another embodiment where the clip 10 is spaced from a wooden fence post using the non-conducting, elongate bar 54. However, the bar 54 is secured to the post using a different fastener 62. The fastener 62 includes small shoulders 64 at each side thereof (only one shoulder being visible in Figure 6) which dig into the material of the post to help secure the fastener in place. A hole 66 is provided through the body of the fastener 62 at an angle to the longitudinal axis of the bar 54 to permit passage of a mechanical fastener, such as a nail, screw or bolt (not shown), for securing the fastener to the wood fence post.

Figure 7 illustrates a further embodiment in which the clip 10 is attached to one side of an end cap 68 that can be detachably secured onto an end of either the T-shaped or wood fence post. The end cap is made from a non-conducting material and includes a cylindrical base 70 that is provided with a suitably shaped aperture to receive the end of the fence post, and a rounded top 72. Again, this embodiment can be used to provide a clip in place of, or in addition to, the previously described clips.

While certain embodiments of the invention have been described as being used on a fence post which is T-shaped, other fence post shapes could be used. Further, the embodiment shown in Figure 6 could be used on fence posts other than wood. The fastener 56 and the end cap 68 would be appropriately altered to permit use with a different fence post shape.

It is to be understood that while certain embodiments of the present invention have been illustrated and described, the invention is not limited to the specific forms or arrangements of parts described and shown.

Claims

What is claimed is:

1. A retainer clip used on a fence post, the combination comprising:
5 a first portion fixedly attached to a part of the fence post; and
a second, moveable portion hingedly attached at a first end thereof to a first end of
the first portion, said second portion being disposed over said first portion and having a
second end thereof in selective engagement with a second end of the first portion,
wherein a loop and an elongated area are defined between the first and second portions
10 when said second end of the second portion is engaged with said second end of the first
portion, said first portion and said second portion being made from a non-conducting
material.
2. The retainer clip and fence post according to claim 1, wherein said non-
15 conducting material comprises plastic.
3. The retainer clip and fence post according to claim 1, wherein the loop is located
adjacent the first ends of the first and second portions.
- 20 4. The retainer clip and fence post according to claim 3, wherein the elongated area
is located between the loop and the second ends of the first and second portions.
5. The retainer clip and fence post according to claim 1, wherein the loop is
generally circular.
- 25 6. The retainer clip and fence post according to claim 1, wherein the elongated area
is generally rectangular.

7. The retainer clip and fence post according to claim 4, wherein the second portion includes a finger extending therefrom toward the first portion, and said first portion includes a notch therein that receives said finger when the second ends are engaged.

8. The retainer clip and fence post according to claim 7, wherein said finger is located between said loop and said elongated area.

9. The retainer clip and fence post according to claim 1, wherein said first portion includes a tapered locking shoulder at said second end thereof, and said second portion includes a tapered locking tab at said second end thereof, said tapered locking shoulder and said tapered locking tab being engaged with each other in order to connect the second ends together.

10. The retainer clip and fence post according to claim 9, further including a finger actuated tab connected to the tapered locking tab for permitting release of the engagement between the locking shoulder and the locking tab.

11. The retainer clip and fence post according to claim 9, wherein said tapered locking shoulder and said tapered locking tab each include an angled side and a straight side, the angled sides facing each other when the second ends are disengaged and the straight sides facing each other when the second ends are engaged.

12. The retainer clip and fence post according to claim 1, wherein said first ends are integrally connected together.

13. The retainer clip and fence post according to claim 1, wherein said fence post part comprises a vertically extending portion of the fence post.

14. The retainer clip and fence post according to claim 13, wherein the fence post includes a head portion and a stem portion extending perpendicularly from the head portion, said first portion being fixedly attached to said head portion.

5 15. The retainer clip and fence post according to claim 1, wherein said fence post part comprises an elongate bar extending perpendicularly from the fence post.

16. The retainer clip and fence post according to claim 15, wherein said elongate bar is detachably secured to the fence post.

10

17. The retainer clip and fence post according to claim 1, wherein said fence post part comprises an end cap secured to an end of the fence post.

Abstract of the Invention

The invention relates to a retainer clip or latch attached to a fence post, such as a plastic fence post, for use in electric fences, that can be used with different types of fence strand members, and that is operated by hand to permit easy securement and removal of the fence strand members. The clip includes first and second portions which are hingedly attached together at one end and are releasably engageable with each other at the opposite end. The clip defines a loop at one end for holding an elongate fence strand member, such as wire, and an elongated area for holding a broader fence strand members, such as electric tape. The loop and elongated area are separated by a finger which extends from the second portion and into a notch in the first portion. The clips can be directly attached to a head portion of a T-shaped fence post at spaced locations along its length. In other embodiments, the clip is attached to an elongate bar which is detachably secured to the head portion of the fence post, or the clip is attached to an end cap which is detachably secured to an end of the fence post.

FIG. 1

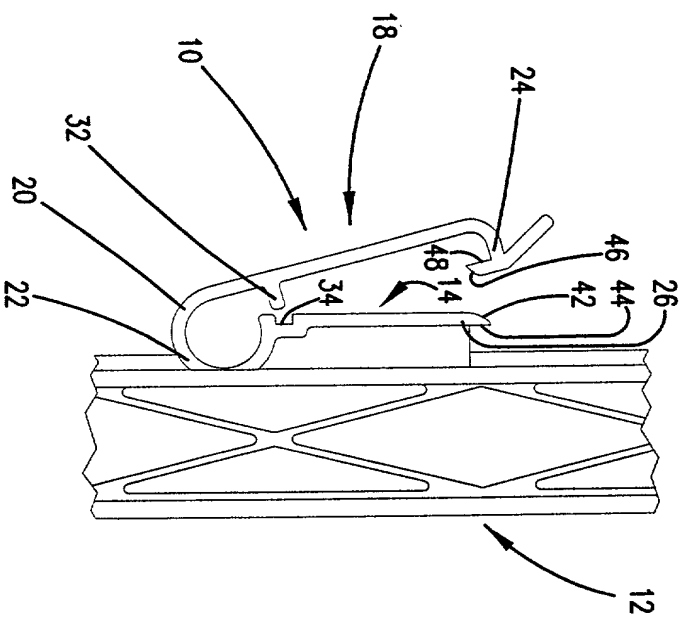


FIG. 2

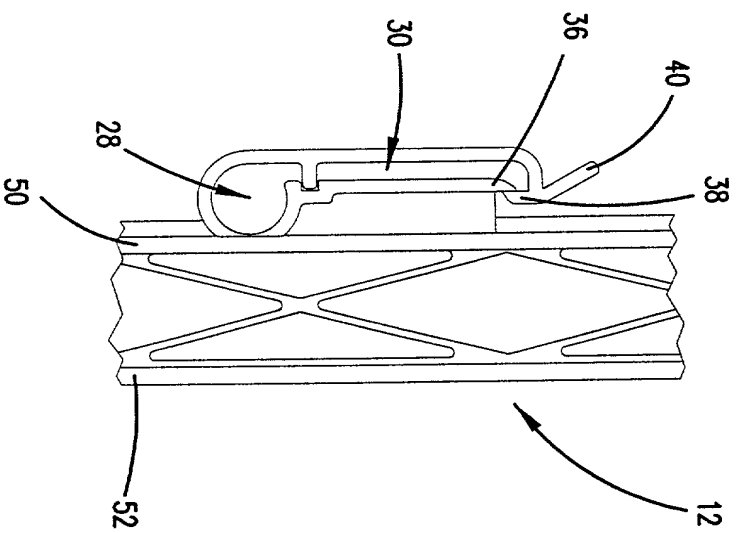
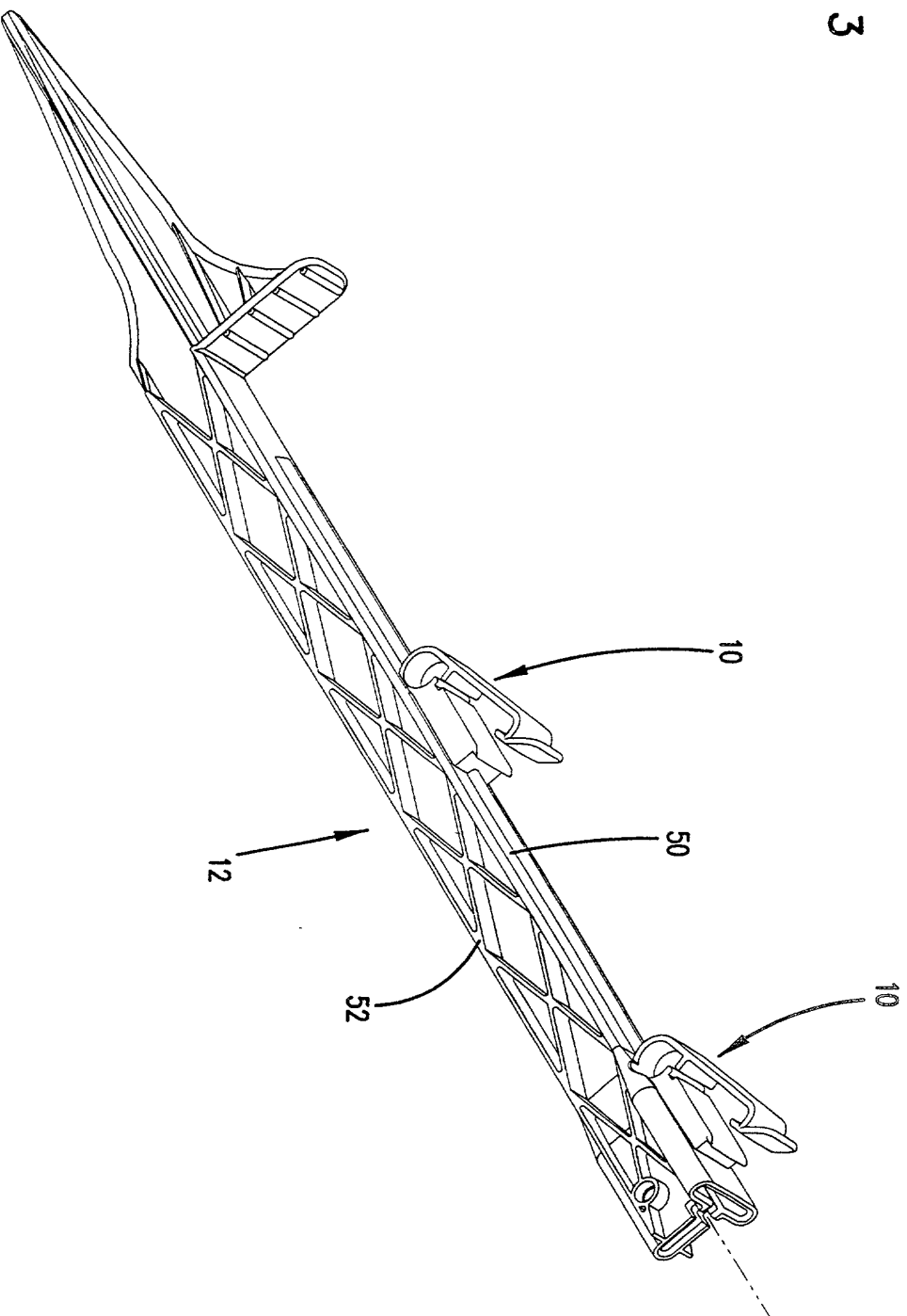


FIG. 3



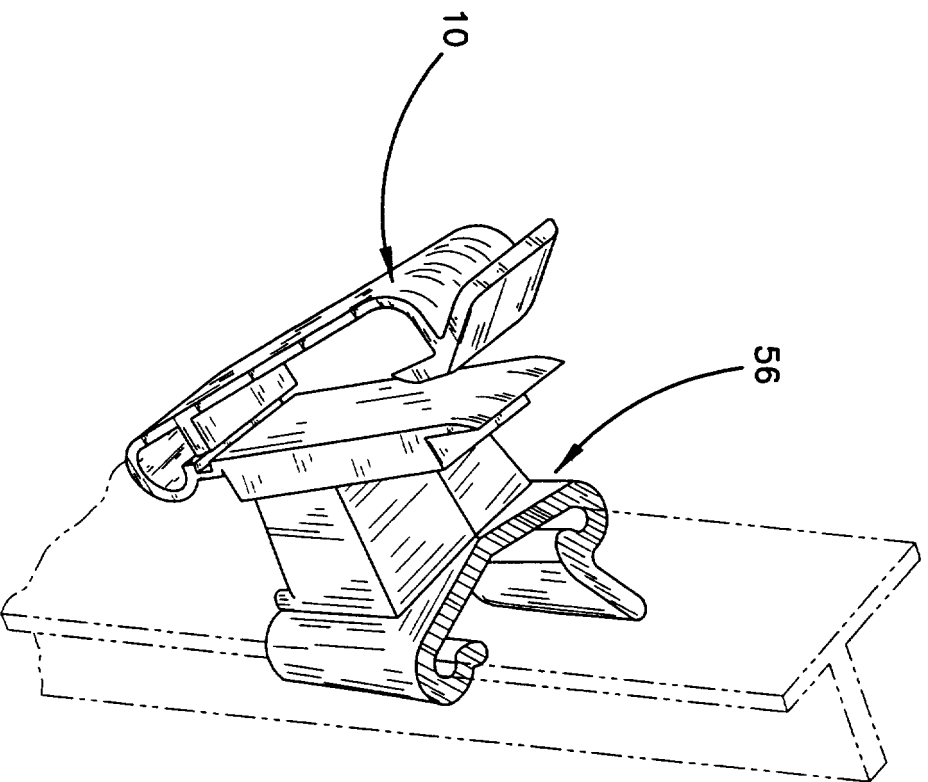


FIG. 5

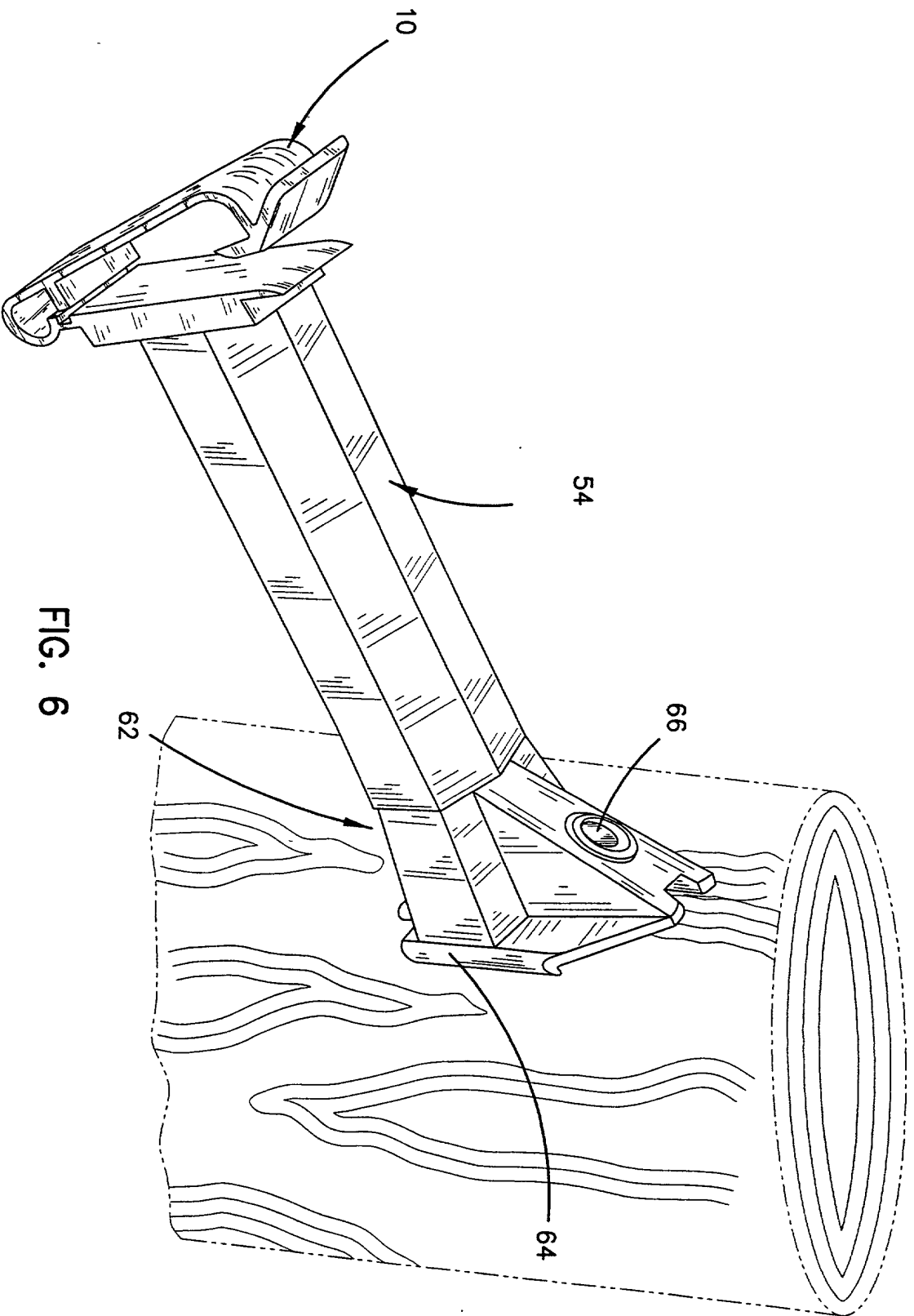


FIG. 6

MERCHANT, GOULD, SMITH, EDELL, WELTER & SCHMIDT

United States Patent Application

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:
FENCE STRAND RETAINER CLIP FOR FENCE POSTS.

The specification of which

a. ☐ is attached hereto

b. ☒ was filed on September 8, 1997 as application serial no. 08/925,576 and was amended on (if applicable) (in the case of a PCT-filed application) described and claimed in international no. filed and as amended on (if any), which I have reviewed and for which I solicit a United States patent.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56 (attached hereto).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

a. ☒ no such applications have been filed.

b. ☐ such applications have been filed as follows:

FOREIGN APPLICATION(S), IF ANY, CLAIMING PRIORITY UNDER 35 USC § 119			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)
ALL FOREIGN APPLICATION(S), IF ANY, FILED BEFORE THE PRIORITY APPLICATION(S)			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)

I hereby claim the benefit under Title 35, United States Code, § 120/365 of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS (patented, pending, abandoned)

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below:

U.S. PROVISIONAL APPLICATION NUMBER	DATE OF FILING (Day, Month, Year)

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

Adriano, Sarah B.	Reg. No. 34,470	Kowalchyk, Alan W.	Reg. No. 31,535
Albrecht, John W.	Reg. No. P-40,481	Kowalchyk, Katherine M.	Reg. No. 36,848
Batzli, Brian H.	Reg. No. 32,960	Lacy, Paul E.	Reg. No. 38,946
Beard, John L.	Reg. No. 27,612	Larson, James A.	Reg. No. 40,443
Beck, Robert C.	Reg. No. 28,184	Lasky, Michael B.	Reg. No. 29,555
Berman, Charles	Reg. No. 29,249	Lindquist, Timothy A.	Reg. No. P-40,701
Bogucki, Raymond A.	Reg. No. 17,426	Lynch, David W.	Reg. No. 36,204
Bruess, Steven C.	Reg. No. 34,130	Mau, Michael L.	Reg. No. 30,087
Byrne, Linda M.	Reg. No. 32,404	Maunu, Leroy D.	Reg. No. 35,274
Canady, Karen S.	Reg. No. 39,927	McDaniel, Karen D.	Reg. No. 37,674
Carlson, Alan G.	Reg. No. 25,959	McDonald, Daniel W.	Reg. No. 32,044
Carter, Charles G.	Reg. No. 35,093	McIntyre, Iain A.	Reg. No. 40,377
Caspers, Philip P.	Reg. No. 33,227	Mueller, Douglas P.	Reg. No. 30,300
Chiapetta, James R.	Reg. No. 39,634	Nasiedlak, Tyler L.	Reg. No. 40,099
Clifford, John A.	Reg. No. 30,247	Nelson, Albin J.	Reg. No. 28,650
Conrad, Timothy R.	Reg. No. 30,164	Orler, Anthony J.	Reg. No. P-41,232
Cooper, Victor G.	Reg. No. 39,641	Pauly, Daniel M.	Reg. No. 40,123
Crawford, Robert	Reg. No. 32,122	Plunkett, Theodore	Reg. No. 37,209
Daignault, Ronald A.	Reg. No. 25,968	Pollinger, Steven J.	Reg. No. 35,326
Daley, Dennis R.	Reg. No. 34,994	Reich, John C.	Reg. No. 37,703
Dalglish, Leslie E.	Reg. No. P-40,579	Reiland, Earl D.	Reg. No. 25,767
Daulton, Julie R.	Reg. No. 36,414	Rittmaster, Ted R.	Reg. No. 32,933
DiPietro, Mark J.	Reg. No. 28,707	Schmaltz, David G.	Reg. No. 39,828
Edell, Robert T.	Reg. No. 20,187	Schmidt, Cecil C.	Reg. No. 20,566
Epp Ryan, Sandra	Reg. No. 39,667	Schuman, Mark D.	Reg. No. 31,197
Farber, Michael B.	Reg. No. 32,612	Schumann, Michael D.	Reg. No. 30,422
Funk, Steven R.	Reg. No. 37,830	Sebald, Gregory A.	Reg. No. 33,280
Gabilan, Mary Susan	Reg. No. 38,729	Sharp, Janice A.	Reg. No. 34,051
Gates, George H.	Reg. No. 33,500	Skoog, Mark T.	Reg. No. 40,178
Glance, Robert J.	Reg. No. P-40,620	Smith, Jerome R.	Reg. No. 35,684
Golla, Charles E.	Reg. No. 26,896	Sumner, John P.	Reg. No. 29,114
Gorman, Alan G.	Reg. No. 38,472	Sumners, John S.	Reg. No. 24,216
Gould, John D.	Reg. No. 18,223	Tellekson, David K.	Reg. No. 32,314
Gresens, John J.	Reg. No. 33,112	Underhill, Albert L.	Reg. No. 27,403
Hamre, Curtis B.	Reg. No. 29,165	Vandenburgh, J. Derek	Reg. No. 32,179
Hillson, Randall A.	Reg. No. 31,838	Victor, David W.	Reg. No. 39,867
Hollingsworth, Mark A.	Reg. No. 38,491	Welter, Paul A.	Reg. No. 20,890
Johnston, Scott W.	Reg. No. 39,721	Williams, Douglas J.	Reg. No. 27,054
Kastelic, Joseph M.	Reg. No. 37,160	Wood, Gregory B.	Reg. No. 28,133
Kettelberger, Denise	Reg. No. 33,924	Xu, Min S.	Reg. No. 39,536
Komanduri, Janaki	Reg. No. P-40,684		

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/ organization who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Merchant, Gould, Smith, Edell, Welter & Schmidt to the contrary.

Please direct all correspondence in this case to Merchant, Gould, Smith, Edell, Welter & Schmidt at the address indicated below:

Merchant, Gould, Smith, Edell,
Welter & Schmidt
3100 Norwest Center
90 South Seventh Street
Minneapolis, MN 55402-4131

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2	Full Name Of Inventor	Family Name	First Given Name	Second Given Name
0	Residence & Citizenship	City	State or Foreign Country	Country of Citizenship
1	Post Office Address	Post Office Address	City	State & Zip Code/Country
		Route 1, Box 1A 906 5 th Ave. East	Ellendale	MN/56026/USA
Signature of Inventor 201:			Date: 10-23-97	
2	Full Name Of Inventor	Family Name	First Given Name	Second Given Name
0	Residence & Citizenship	City	State or Foreign Country	Country of Citizenship
2	Post Office Address	Post Office Address	City	State & Zip Code/Country
		Route 1, Box 1A 906 Fifth Ave. East	Ellendale	MN/56026/USA
Signature of Inventor 202: Ronald H. Langlie			Date: 10/17/97	
2	Full Name Of Inventor	Family Name	First Given Name	Second Given Name
0	Residence & Citizenship	City	State or Foreign Country	Country of Citizenship
3	Post Office Address	Post Office Address	City	State & Zip Code/Country
		Route 1, Box 1A 906 5 th Ave. East	Ellendale	MN/56026/USA
Signature of Inventor 203: David L. Buckle			Date: 10/24/97	
2	Full Name Of Inventor	Family Name	First Given Name	Second Given Name
0	Residence & Citizenship	City	State or Foreign Country	Country of Citizenship
4	Post Office Address	Post Office Address	City	State & Zip Code/Country
Signature of Inventor 204:			Date:	
2	Full Name Of Inventor	Family Name	First Given Name	Second Given Name
0	Residence & Citizenship	City	State or Foreign Country	Country of Citizenship
5	Post Office Address	Post Office Address	City	State & Zip Code/Country
Signature of Inventor 205:			Date:	

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim;

or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application:

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.